(ii) At the TIFR Nodal Centre, some progress has been made in the hidden Markov model, and expert system approach for Speech Recognition.

(iii) At National Centre for Software Technology (NCST), an expert system shell and simple implementation of WSP have been developed. Expert Systems for cardiac arrested solution of simultaneous equations development have also been developed.

(iv) At Indian Institute of Technology (IIT), Madras Nodal Centre, expert systems for rural information, health and planning and for engineering design and trouble shooting, for automatic process planning are being developed.

(v) At the Indian Statistical Institute (ISI) Nodal Centre, project on geographical mapping along with GSI has been completed and another one on the industrial inspection system is underway.

(vi) At the Department of Electronics (DOE) Nodal Centre, an expert system for Income-tax assessment has been designed and developed. It is now under extensive testing. Work in the Logic Programming has also begun at this centre for legal reasoning application in the Government.

(b) Research in Natural Language at NCST is in 2 broad areas.

(i) Man-machine communication using natural language ;

(ii) Human aided machine translation (from English to Hindi for a limited subset of language using a limited vocabulary).

NCST has emphasised the use of interaction alongwith the Artificial Intelligence to obviate problems in Natural Language understanding. Knowledge representation scheme used includes frame like predicative structures. The group at NCST is not fully convinced about Sanskrit as a practical formalism for knowledge representation.

(c) A specific project on Sanskrit as a computor language for artificial Intelligence has not yet been formulated under the FGCS/KBCS Programme.

Dam over Rives Mahanadi

*460. SHRI KAHNU CHARAN LENKA : Will the Minister of WATER RESOURCES be pleased to state :

(a) whether any scheme has been received from the Orissa Government to construct a dam on river Mahanandi downstream of Hirakund Dam;

(b) if so, what are the details thereof; and

(c) by when the work on it is likely to be started?

THE MINISTER OF LAW AND JUSTICE AND THE MINISTER OF WATER RESOURCES (SHRI B. SHANKARANAND): (a) and (b) Yes, Sir. The project estimated to cost Rs. 1103 crores envisages flood protection to an area of about 6.57 lakh hectares besides installed power capacity of 960 MW

(c) The project has not been included in the Seventh Five Year Plan.